40-129-R
40-368
36

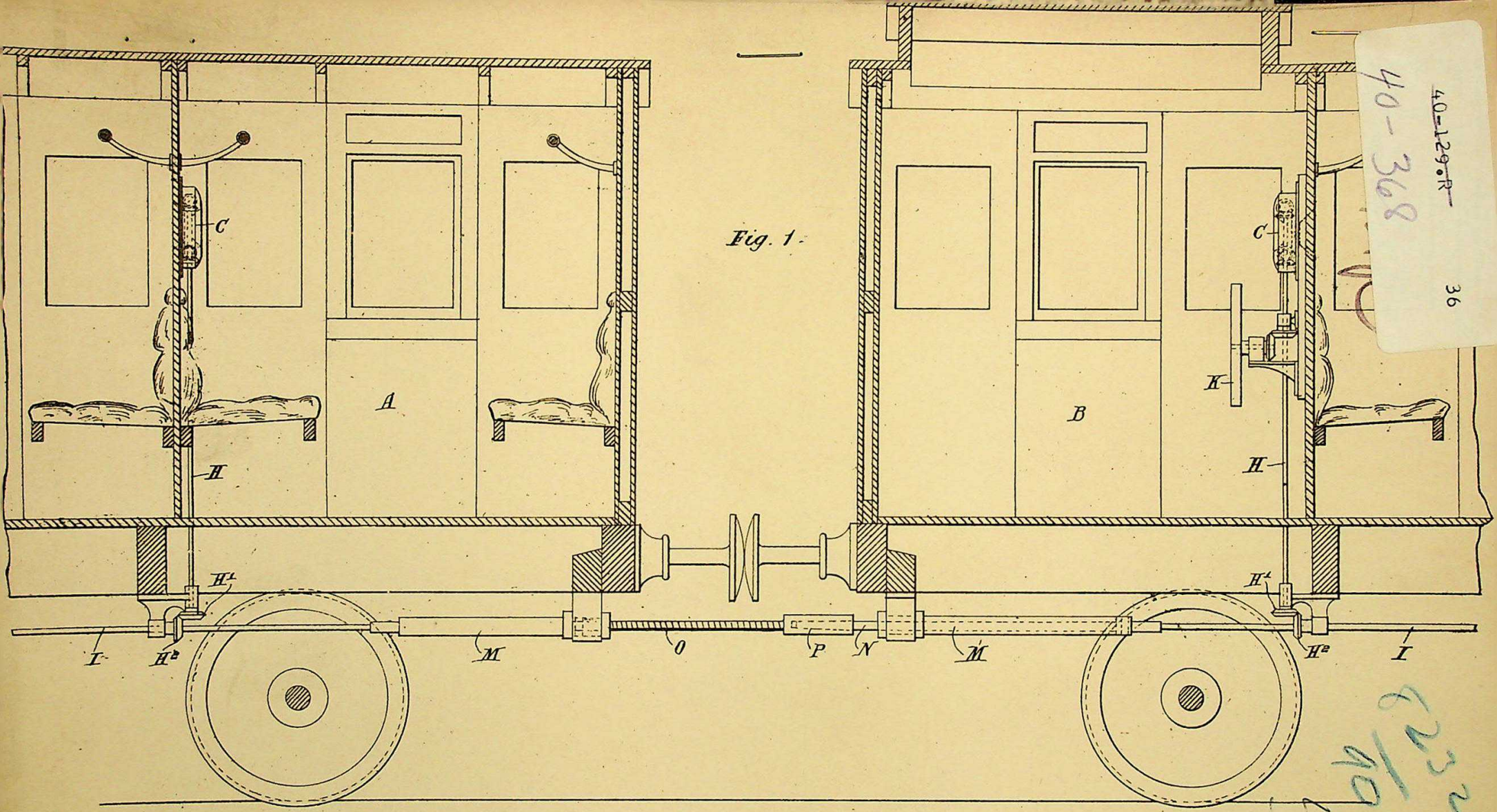
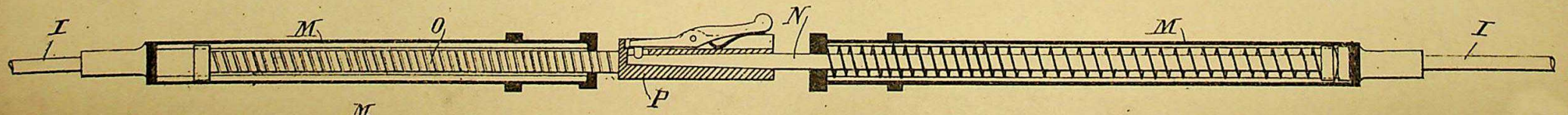


Fig. 1.

Fig. 2



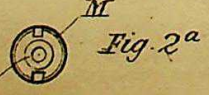


Fig. 2ª

Signals Station

22

N° 8232 A.D. 1890

Date of Application, 27th May, 1890
Complete Specification Left, 27th Feb., 1891—Accepted, 28th Mar., 1891

PROVISIONAL SPECIFICATION.

Improvements in Apparatus for Indicating the Names of Stations to Railway Passengers.

We, HENRY GRANVILLE DICKSON, of Cheam, in the County of Surrey, Clerk in Orders, and GEORGE HURDLE, of 31, Adelaide Road, St. Deny's, in the County of the Town of Southampton, Gas Engineer, do hereby declare the nature of this invention to be as follows :—

The object of this invention is to provide simple and efficient means whereby the passengers in a railway carriage may be informed of the next station at which the train will stop.

Many attempts have been made to provide a convenience of this kind, but the more or less complex nature of the apparatus has no doubt prevented their employment.

In carrying out our invention, we place in every partition, or in alternate partitions, separating one compartment of a railway carriage from another, or in any other convenient position in such carriage, a double faced indicator. This indicator consists of a frame provided with glazed shutters, and containing a pair of rollers carrying a band, on which is printed, on both faces, the names of stations on the route.

These rollers are operated by an endless band passing over pulleys fitted at one end of each roller, and connected thereto by a pawl and ratchet motion, so arranged, that only one roller can be driven at a time, the other being loose.

At the top, or in any other convenient place, of every carriage throughout the train, is mounted a shaft carrying, at intervals, pullies which are connected by bands or cords with the rollers of the indicator. The lengths of shafting on the several carriages forming the train, are coupled together, between the carriages, by a special coupling, one part consisting of a barrel or hollow case attached to one end of the length of shafting to contain a bolt, which is retained in such barrel by a spiral or other spring, means being provided to prevent the bolt turning in the barrel. The outer end of the bolt is slotted, and fits into the other part of the coupling, which consists of a slotted socket carrying a pivotted spring catch or catches, which take into, and project through the slots.

The socket is attached to its portion of shafting by a flexible connection.

To couple up, the bolt is drawn out from its barrel, and the slotted end is forced into the socket, by which means the catches are raised, and the slot of the bolt is brought into position to receive the catches, which spring into it, securing the bolt.

To uncouple, it is only necessary to raise the catches, by which means the bolt is freed, and it is then automatically withdrawn from the socket by the spring in its own barrel.

In the guard's van we place a single faced indicator, corresponding to those in the carriages. This indicator is connected by a chain and chain wheels with the shafting which actuates the other indicators, and motion is communicated to the chain wheel of the guard's indicator by a crank handle or other means.

When a train is made up and shafting coupled, the indicators throughout the train are in a position to be worked from the guard's van, by the simple turning of the crank handle above mentioned.

At the end of each carriage, we provide a chain and chain-wheels similar to those in the guard's van, so that all the indicators in a train can be made to correspond. This is especially desirable in the case of carriages being added to a train from another route, coming on to the main route, or in the case of extra carriages, when required.

[*Price* 8*d*.]

The indicator may be made to open by a key, so that at any time the name band of one route can be taken out, and that of another route substituted.

The bands may also be driven by means other than those described, such as bevil gearing, but we believe driving by bands will be found the simplest and most efficient. Means will also be provided to cover up the driving band, so that they will not be affected by the weather.

Dated this 27th day of May 1890.

NEWTON & SON,
Agents for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Apparatus for Indicating the Names of Stations to Railway Passengers.

We, Henry Granville Dickson, of Cheam, in the County of Surrey, Clerk in Orders, and George Hurdle, of 31, Adelaide Road, St. Deny's, in the County of the Town of Southampton, Gas Engineer, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

The object of this invention is to provide simple and efficient means whereby the passengers in a railway carriage may be informed of the next station at which the train will stop.

Many attempts have been made to provide a convenience of this kind, but the more or less complex nature of the apparatus has no doubt prevented their employment.

In carrying out our invention, we place in every partition, or in alternate partitions, separating one compartment of a railway carriage from another, or in any other convenient position in such carriage, a double faced indicator. This indicator consists of a frame provided with glazed shutters and containing a pair of rollers suitably operated from the guard's van, and carrying a band on which is printed on both sides the names of the stations in their proper order on the route.

In the accompanying drawings,

Fig. 1 shows, in sectional elevation, part of a carriage and part of the guard's van, with our invention applied thereto.

Fig. 2 shows a mode of coupling the indicating mechanism of two carriages.

Fig. 3 is a front view of the indicator, with the actuating mechanism in dotted lines.

Fig. 4 is a section on the line $x\ x$, looking from below ; and

Fig. 5 a section on the line $z\ z$, looking from below, both of Fig. 3 ; and

Fig. 6 is an end view (with the side of the box removed) of the indicator.

Fig. 7 is a front view, and Fig. 8 an end view (with the side of the box removed), of the indicator, slightly modified, as applied in the guard's van.

A is a passenger carriage, and B the guard's van or compartment. C is the indicator, which is fixed to, or in the partition between two compartments of the carriage, and on the wall of the guard's compartment.

The indicator consists of a rectangular box or case C, provided with hinged glazed shutters on both sides, for exhibiting both sides of the indicating band. Fitted in this box or casing C, is a frame C^1, in which are mounted two rollers D, carrying a band D^1 on both sides of which the names of the stations on a special route are printed in their proper order. E is a spring which bears against the ends of the axles of rollers D, and gives a slight amount of friction. The axles D, at one end, project beyond the frame C^1, and carry on their free ends mitre wheels F. By thus arranging the indicator, the band of one route may be removed, and replaced by that of another, as occasion may require, by simply withdrawing the frame C^1 from the box or casing C.

The band D^1 is driven by mitre wheels G gearing with the mitre wheels F, and

mounted loosely on a vertical shaft H which projects downwards below the carriage. This shaft H has, at its lower end, a mitre wheel H^1, which gears with a corresponding wheel H^2 on a horizontal shaft I, carried in brackets or hangers fixed to the under frame of the carriage.

The connection between the loose mitre wheels G and the shaft H, is by pawl and ratchet mechanisms G^1 G^2, which are set in opposite directions, so that only one wheel G at a time is driven, the other running free. In this way provision is made for working the name band D^1 in either direction, as required.

The indicator in the guard's van is worked by means of the hand wheel K, which actuates the shaft H through mitre gearing (see Fig. 1). At the same time this shaft H communicates motion to the horizontal shaft I of the guard's van, which shaft, through suitable couplings, actuates the corresponding shafts of all the carriages making up the train, or it may be a division thereof.

In place of the shaft H, we may use an endless chain L to drive the mitre wheels G, the said wheels being provided with chain wheels, and mounted on a stud axle secured to the side of the box C; or the connection may be made between the shaft H and the rollers by worm and worm wheels.

This modification will be clearly understood by reference to Figs. 7 and 8, the pawl and ratchet mechanism being used as before.

The coupling between the several lengths of the shaft I which it is preferred to use, is shown at Fig. 2.

At each end of a length I is a barrel M, formed with one or more internal feathers or keyways (see the cross section Fig. 2^A). In one barrel is a rod N, provided at its inner end with a block or piston, which is prevented from turning independently of the barrel by the feathers or key ways. On the rod is mounted a spiral spring, the tendency of which is to draw the rod within the barrel. In the other barrel is placed a flexible shaft O, attached at its inner end to a block, which is prevented from turning by the feathers in the barrel, and having at its outer end a socket P to receive the rod N, provided with a spring catch to retain the rod in the socket, when the parts are coupled.

The spring on the rod N allows for the expansion or contraction of the coupling, when going round curves, and also keeps the parts at proper tension, to ensure their working properly.

From the above description it will be seen that the indicators are actuated by the guard from his van, so that all risk of wrong indications will be avoided.

In making up a train, it will be necessary to adjust the indicators of each carriage so that all the indicators in a train will correspond. This may be conveniently effected by means of a key or wrench applied to the square end of the rod N. Such adjustment is specially needed in the case of extra carriages being added to the train.

Having now particularly described and ascertained the nature of the said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. The apparatus for indicating the names of stations to passengers in railway carriages, substantially as herein shown and described.
2. The form of coupling as described with reference to Fig. 2 of the drawings.

Dated this 27th day of February 1891.

NEWTON & SON,
Agents for the Applicants.

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